

B.Sc. II (CBCS Pattern) Sem-III
012B - Botany Paper-II : Plant Biochemistry and Physiology

P. Pages : 2

Time : Three Hours



GUG/W/22/11599

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagrams wherever necessary.

1. Write on:

- a) Properties and role of aldoses and Ketoses. 5
- b) Structure and uses of fatty acids. 5

OR

Write short notes on:

- c) Structure of sucrose. 2½
- d) Waxes. 2½
- e) Primary structure of proteins. 2½
- f) Sphingolipids. 2½

2. Write on:

- a) Regulation of enzyme activity. 5
- b) Mechanism of root nodule formation. 5

OR

Write short notes on:

- c) Role and deficiency of Nitrogen in plants. 2½
- d) Nitrate reductase. 2½
- e) Holo enzyme 2½
- f) Role and deficiency of copper (cu) in plants. 2½

3. Write on:-

- a) Cohesion-Adhesion theory. 5
- b) Munch hypothesis. 5

OR

Write short notes on:

- c) Plasmolysis. 2½
- d) Donnan's equilibrium theory. 2½
- e) K^+ ion theory of stomatal movement. 2½
- f) Water potential 2½

4. Write on:

- a) Calvin cycle. 5
- b) ETS in mitochondria. 5

OR

Write short notes on:

- c) Non-cyclic photophosphorylation. 2½
- d) Chlorophyll pigments. 2½
- e) Structure of ATP. 2½
- f) Anaerobic respiration. 2½

5. Write **any ten** in two or three lines only (diagrams are not necessary) 10

- a) Sterol
- b) Cellulose
- c) Aliphatic amino acids
- d) Co-Factor
- e) Leg-hemoglobin
- f) Necrosis
- g) Guttation
- h) Diffusion
- i) Carrier concept
- j) Kranz anatomy
- k) Red drop
- l) R. Q.
